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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,203	02/05/2001	Timothy M. Schmidl	TI-31284	3036

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EXAMINER	
GHULAMALI, QUTBUDDIN	
ART UNIT	**PAPER NUMBER**
2637	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/777,203	SCHMIDL ET AL.	
	Examiner	Art Unit	
	Qutub Ghulamali	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 02/02/2005.

2. The examiner withdraws objection to drawings Figures 1 and 2 on the basis of remarks offered by the applicant, page 9, dated 2/2/2005.

3. Applicant's arguments with respect to claims 1, 8, 10 and 16, and the newly recited claims 23-26 and 27-32, have been considered, but they are moot in view of the new ground(s) of rejection. Rejections based on the newly cited reference(s) follows:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4, 6-8, 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogard (US Patent 4,718,066) in view of Palm (US Patent 6,694,470).

Regarding claims 1, 2, 23, 24, 26, and 27, Rogard discloses a data communications system and a method for transmission of signals from a transmitter to a receiver, the transmitter comprising:

the transmitter end applying to a plurality of original data bits that are to be transmitted to the receiving end an encoding algorithm that produces overhead bits (encoding means for encoding a

message in sets of data blocks (plurality of data bits), each block including additional check symbols enabling detection and correction within the block including redundant data blocks (produce overhead bits)) (col. 3, lines 20-35);

the transmitting end transmitting the original data bits without the overhead bits in a first transmission to the receiving end (col. 3, lines 20-44; col. 5, lines 20-41). Rogard however, does not explicitly show transmitting end refraining from transmitting the overhead bits until the transmitting end receives an indication of error in reception from the receiving end. Palm in a similar field of endeavor discloses,

transmitting end refraining from transmitting the overhead bits until the transmitting end receives an indication from the receiving end that the original data have not been correctly received at the receiving end (col. 3, lines 23-51, 48-67; col. 15, lines 26-32). It would have been obvious to a person of ordinary skill in the art the time the invention was made to provide a similar arrangement as taught by Palm in the system of Rogard because it can minimize retransmission of signals and conserve transmission power and time.

Regarding claims 3, 29, 31, Rogard discloses means at the receiving end to combine the 8 data blocks plus redundant supplementary blocks as desired and a decoding process that corresponds to said encoding process (table VI) (col. 5, lines 65-67; col. 6, lines 1-10).

Regarding claims 4, 7 and 32, Rogard discloses a transmitter and a receiver, the receiver inherently receives signals through an input, discloses encoding means for encoding a message in sets of data blocks, transmitting means for an output to be transmitted across the communication channel, a means for a data path to remote receiver between transmitter and receiver responsive to a return signal from said receiver apparatus indicating that data and the overhead (redundant)

bits, an interrupt (control) transmission of said current set of data blocks and cause said transmitting means to transmit the next set of data block (col. 3, lines 20-36, 37-66), an error detection and correction enabled in the encoder means within a received data block (col. 3, lines 37-44).

Regarding claims 6, 30, Rogart discloses a receiver means for transmitting to the transmitting end a return signal indicating that a sufficient number of data blocks has been correctly received, after correction if necessary, for decoding of the current set of data, to interrupt transmission and cause transmitting means to transmit the next original set of data block (col. 3, lines 20-35).

Regarding claim 8, Rogard discloses a method of communicating data from a transmitter end to a receiving end comprising:

the receiving end receiving, from the transmitting end a first transmission including original data bits (col. 3, lines 7-19). Rogard however, does not explicitly show the receiver determining if data bits are received or not received correctly and transmitting a request for retransmission. Palm in a similar field of endeavor discloses,

the receiving end determining whether the original data bits have been received correctly and, responsive to a determination that the original data bits have not been received correctly, the receiving end transmitting to the transmitting end a request for transmission of overload bits produced at the transmitting end by operation of an encoding algorithm applied to the original data bits (abstract; col. 3, lines 23-51, 48-67; col. 15, lines 26-32). It would have been obvious to a person of ordinary skill in the art the time the invention was made to provide a similar

arrangement as taught by Palm in the system of Rogard because it can minimize error in retransmission of signals and conserve transmission power and time.

Regarding claims 9, 28, Rogart discloses every feature of the claimed invention with reference to claim 8 above, but does not explicitly disclose a convolutional encoding algorithm. Official Notice is taken that both the concept and the advantages of using convolutional encoding algorithm are conventional and expected in the art. Therefore it would have been obvious to a person of ordinary skill in this art to include convolution encoding algorithm because it can provide reliable encoding of signals for Rogart.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 10, 11, 13, 14, 16-20, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rogard (US Patent No. 4,718,066).

Regarding claims 10, 16-18, 20, Rogard discloses a transmitter and a receiver, the receiver inherently receives signals through an input, discloses encoding means for encoding a message in sets of data blocks, transmitting means for an output to be transmitted across the communication channel, a means for a data path to remote receiver between transmitter and receiver responsive to a return signal from said receiver apparatus indicating that data and the overhead (redundant) bits, an interrupt (control) transmission of said current set of data blocks

and cause said transmitting means to transmit the next set of data block (col. 3, lines 20-36, 37-66), an error detection and correction enabled in the encoder means within a received data block (col. 3, lines 37-44).

Regarding claims 11 and 19, Rogard discloses register to correctly receive and store corrected data block (col. 3, lines 57-66).

Regarding claim 13, Rogart discloses control information ARQ includes a negative acknowledgement (NACK) (col. 1, lines 60-66).

Regarding claims 14, 22, Rogard discloses means for wireless communication between satellite to earth station (col. 1, lines 22-25).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 5, 15, 21, 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogard (US Patent No. 4,718,066).

Consider claims 5, 21, 25, Rogart discloses every feature of the claimed invention but does not explicitly disclose Viterbi encoding and decoding algorithms. Such techniques are conventional and expected in the art. Therefore it would have been obvious to a person of ordinary skill in this art to include Viterbi encoding and decoding algorithms to provide efficient and reliable data reception and transmission with Rogart.

Regarding claim 15, Rogart discloses every feature of the claimed invention except a convolutional encoding algorithm. Official Notice is taken that both the concept and the advantages of using convolutional encoding algorithm are conventionally well known and expected in the art. Therefore it would have been obvious to a person of ordinary skill in this art to include convolution encoding algorithm because it can provide reliable encoding of signals for Rogart.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rogard (US Patent No. 4,718,066) in view of Jalali et al (US Patent 6,694,469).

Regarding claim 12, Rogart discloses all claimed limitation except a selector coupled between buffer and output. Jalali in a similar field of endeavor discloses data path include a selector coupled between buffer and output for obtaining one of the original data bits and the overhead bits from buffer to be provided to output for transmission (col. 4, lines 13-16, 27-33). It would have been obvious to a person of ordinary skill in this art at the time the invention was made to include a selector for selecting the original and overhead bits as taught by Jalali in the system of Rogard because it can provide the desired bits to the output for maximized transmission of signals.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents:

Bims et al (USP 6,557,134) shows an ARQ method for wireless communication.

Yoshida (USP 6,493,562) discloses information delivery method for communication devices.

Hamilton et al (USP 6,392,993) shows a method and computer program for efficiently and reliably sending small data messages from a sending system to a large number of receiving systems.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.
July 6, 2005.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER